

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appl. No.: 09/732,712

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph on page 5 with the following amended paragraph:

1. A method for measuring a water concentration in liquefied ammonia having a water concentration of no more than 10 ppm, comprising introducing a gaseous phase moiety of liquefied ammonia, said liquefied ammonia having a water concentration of 10 ppm or less, as a reference gas into a multi-reflection long optical path cell, measuring infrared (IR) spectrum of the reference gas as a background of an IR spectrometer, introducing a gas obtained by vaporizing liquefied ammonia as a sample at a constant flow rate into the cell, measuring infrared (IR) spectrum of the sample employing the background of the spectrometer, measuring absorption intensity in the IR spectrum of the sample at an infrared wave number at which water absorbs IR and at which infrared absorptions of water and ammonia do not overlap, and determining the water concentration based on the measured absorption intensity from a water concentration calibration curve prepared in advance~~using ammonia having a water concentration of 10 ppm or less as a reference gas, introducing the ammonia at a constant flow rate into a multi-reflection long optical path cell, and measuring infrared absorption intensity of water at a wave number at which infrared absorptions of ammonia and water do not overlap.~~

Replace the paragraph bridging pages 5 and 6 with the following amended paragraph:

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3. The method for measuring a water concentration in ammonia as described in 2 above, wherein the measurement wave number is in the range of from 3,500 to 4,000 cm^{-1} ~~one or more selected from the group consisting of 3600, 3609, 3612, 3619, 3629, 3634, 3649, 3656, 3670, 3675, 3688, 3691, 3701, 3709, 3712, 3719, 3722, 3727, 3732, 3736, 3741, 3744, 3749, 3752, 3756, 3759, 3766, 3770, 3779, 3785, 3796, 3801, 3807, 3816, 3821, 3826, 3831, 3835, 3837, 3840, 3843, 3854, 3862, 3865, 3870, 3874, 3880, 3885, 3891, 3894, 3899, 3902, and 3904 cm^{-1}~~ (variation width: $\pm 1 \text{ cm}^{-1}$).

Replace the third, fourth and fifth complete paragraphs on page 6 with the following amended paragraphs.

6. The method for measuring a water concentration in liquefied ammonia as described in 1 above, wherein the liquefied ammonia has a water concentration of 10 ppm or less.
7. The method for measuring a water concentration in liquefied ammonia as described in 6 above, wherein the liquefied ammonia that is to be measured has a water concentration of 1 ppm or less and the liquefied ammonia that is employed to obtain a gaseous phase moiety as a reference gas has a water concentration of 1 ppm or less.
8. The method for measuring a water concentration in liquefied ammonia as described in 7 above, wherein the liquefied ammonia that is to be measured has a water concentration of 0.1 ppm or less and the liquefied ammonia that is employed to obtain a gaseous phase moiety as a reference gas has a water concentration of 0.1 ppm or less.

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Replace the paragraph bridging pages 10 and 11 with the following amended paragraph

When the infrared absorption wave number of ammonia and the infrared absorption wave number of water are examined in particular, the infrared absorption wave numbers of water present in the ranges of from 3,500 to 4,000 cm^{-1} , from 2,600 to 3,100 cm^{-1} and from 1,900 to 2,400 cm^{-1} are found to be small in the influence of ammonia and free of overlapping with the infrared absorption by ammonia. Therefore, the infrared absorption intensity is measured using one or more of wave numbers falling within these ranges, preferably one or more wave number selected from the group consisting of ~~3600, 3609, 3612, 3619, 3629, 3634, 3649, 3656, 3670, 3675, 3688, 3691, 3701, 3709, 3712, 3719, 3722, 3727, 3732, 3736, 3741, 3744, 3749, 3752, 3756, 3759, 3766, 3770, 3779, 3785, 3796, 3801, 3807, 3816, 3821, 3826, 3831, 3835, 3837, 3840, 3843, 3854, 3862, 3865, 3870, 3874, 3880, 3885, 3891, 3894, 3899, 3902 and 3904 cm^{-1}~~ (variation width: $\pm 1 \text{ cm}^{-1}$), ~~more preferably one or more wave number selected from the group consisting of~~ 3801, 3807, 3816, 3821, 3837 and 3854 cm^{-1} (variation width: $\pm 1 \text{ cm}$).

Add the following new paragraph at page 13, after the first complete paragraph.

The measurement sample gas container 9 may have any structure as far as liquefied ammonia can be taken out from the container. Such structures are well known in the art. Fig. 1 illustrates an example of such a well known structure. Fig. 1 illustrates the inside of the

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container 9. In Fig. 1, the dipping tube 50 of the container 9 enables liquefied ammonia to be withdrawn from the interior of the container.